



## ecology and environment, inc.

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### MEMORANDUM

DATE: October 16, 1996

TO: Mark Ader, U.S. EPA, Region 10

FROM: *for Jeffrey Dowlan*  
Jeryl Kolb, Project Manager, E & E, Seattle

SUBJ: Hazard Ranking System Score  
Spur Industries, Inc.  
Spokane, Washington

REF: Contract No. 68-W6-0008  
Technical Direction Document No. 96-06-0001

cc: Gary Sink, U.S. EPA, Region 10  
William Carberry, E & E, Seattle

A Hazard Ranking System (HRS) score has been developed for the Spur Industries, Inc. site in Spokane, Washington as part of a Preliminary Assessment (PA) based on U.S. EPA site files, federal, state, and local government documents, target information, and where necessary, professional assumptions.

Spur Industries, Inc. is an active manufacturing facility involved in the custom bonding, machining, and sanding of aluminum plates. The facility operates a small chrome plating shop as part of these processes. The site operations and waste management practices have been a point of contention (b) (6)

As a consequence, numerous federal, state, and local government agencies have visited (b) (6), observed site operations and waste management procedures, and compared them to existing environmental regulations. Other than a few minor disposal issues, which have since been corrected, no spills, areas of staining, gross contamination, or on-site burial were observed during any of the investigations.

Please find attached HRS scoresheets generated using PREscore 4.1 software. The software program picked up an erroneous toxicity/mobility value for the groundwater pathway of 10,000 generating an incorrect waste characteristics value of 32 for the groundwater pathway. The toxicity/mobility value should be 100 and the waste characteristics value should be 10. The overall HRS score for the site is 9.61. The following information/assumptions were used to derive the score.



### Sources

- The two 450-gallon tanks in the plating building, one for chromic acid, the other for rinse water, are not used continuously and the process is a closed system whereby the materials are recycled and reused. Although adequate secondary containment is also present, the tanks will be considered as sources because of the potential for a release to the environment, either in the past or in the future. A hazardous waste quantity of 4.5 cubic yards is generated for this source.
- The facility includes a small used oil storage area located behind Building 1. The area is fenced and asphalted, but not roofed. The used oil is placed in poly 55-gallon drums after being removed from forklifts and other machinery. It is transported off site and recycled on a regular basis, and at the time of the START visit there were approximately five poly 55-gallon drums. A hazardous waste quantity of 275 gallons is generated for this source.
- At the time of the START visit there were also approximately 10 poly 55-gallon drums of chromic acid in a dry granular form stored behind Building 1. A hazardous waste quantity of 550 gallons is generated for this source.
- One poly 55-gallon drum of printing ink containing methyl ethyl ketone was also stored behind Building 1 during the START visit. A hazardous waste quantity of 55 gallons is generated for this source.

### Groundwater Migration Pathway

- Chromium, hexavalent chromium, and lead provide toxicity/mobility factor values of 100.
- An observed release to groundwater is not assumed. Targets are expected to be subject to potential contamination.
- The nearest public drinking water well is located approximately one mile from the site and is part of the system that provides water to the site and surrounding neighborhood. The closest private drinking water well is also located approximately one mile from the site.
- Groundwater is a major resource in the area, is used to provide drinking water to approximately 33,500 people within a four mile radius of the site, and is used for cropland irrigation.
- The aquifer of concern (the Rathdrum Prairie Aquifer) is a sole source aquifer.

### Surface Water Migration Pathway

- Chromium, hexavalent chromium, and lead provide a maximum toxicity/persistence value of 10,000 for the drinking water threat.

- Lead provides a maximum toxicity/persistence/bioaccumulation value of  $5 \times 10^5$  for the human food chain threat.
- Lead provides a maximum ecosystem toxicity/persistence/-environmental bioaccumulation value of  $5 \times 10^6$  for the environmental threat.
- An observed release to surface water is not assumed, because surface water drains to on site drywells and terrain between the site and the nearest surface water body is level.
- The nearest surface water body is located approximately 0.5 miles south of the site.
- The 2-year, 24-hour rainfall event is 0.14 inches.
- The drainage area of the site is approximately 5 acres.
- Surficial soils are described to a depth of 12-14 inches as loams and sandy loams.
- The site is in a 500-year floodplain.
- The flow rate of the Spokane River is approximately 7,000 cubic feet per second.
- There is one drinking water intake located on the Spokane River within 15 miles downstream of the site that serves 2.47 people. Four additional surface water intakes on the river irrigate a total of 5 acres.
- The Spokane River within 15 miles downstream of the site is state-designated priority habitat used by the Bald eagle, a federally- and state-listed threatened species, and species of recreational importance. The surface water pathway does not contain populations of anadromous fish species, and no fish catch data exists, however, it is assumed that 200 pounds of fish are caught for human consumption within 15 miles downstream of the site.
- Approximately 20 miles of wetland river frontage exists within 15 miles downstream of the site.

#### Soil Exposure Pathway

- Chromium, hexavalent chromium, and lead provide the maximum toxicity value of 10,000.
- The site is currently active.
- There are no schools or day cares within 200 feet of the site. The nearest residence is located approximately 50 feet from the nearest potential source.



- The site is fenced with a gated entrance, is well-lit, and is not generally accessible to the public.
- Thirty-three workers are employed at the site.
- Approximately 1,112 people reside within one mile of the site.

#### Air Migration Pathway

- Methyl ethyl ketone provides the maximum toxicity/mobility value of 10.
- An observed release to air is not assumed because potential sources are contained or enclosed in buildings, and based on visual observations of the site.
- The nearest individual is located approximately 50 feet from the closest source, the plating tanks in Building 2.
- Approximately 36,450 people reside within four miles of the site.
- Areas used for commercial agriculture are present within 1/2 miles of the site.
- A state-designated priority habitat exists along the Spokane River within four miles of the site. The habitat is used by the Bald eagle, a federally- and state-listed threatened species, as well as others species of recreational importance.
- Approximately 303 acres of wetlands are located within four miles of the site.

If you have any questions regarding the HRS score or assumptions used to derive the score, please call me at 206/624-9537.

\* Maximum value applies to waste characteristics category.  
\*\* Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Spur Industries - 10/10/96

3 SURFACE WATER OVERLAND/FLOOD MIGRATION	3	3	3
3 COMPONENT	3	Maximum	3 Value
3 Factor Categories & Factors	3	Value	3 Assigned
3 DRINKING WATER THREAT	3	3	3
3 Likelihood of Release	3	3	3
3 1. Observed Release	3	550	3 0
3 2. Potential to Release by Overland Flow	3	3	3
3 2a. Containment	3	10	3 10
3 2b. Runoff	3	25	3 0
3 2c. Distance to Surface Water	3	25	3 6
3 2d. Potential to Release by Overland	3	500	3 60
3 Flow [lines 2a(2b+2c)]	3	3	3
3 3. Potential to Release by Flood	3	3	3
3 3a. Containment (Flood)	3	10	3 10
3 3b. Flood Frequency	3	50	3 7
3 3c. Potential to Release by Flood	3	500	3 70
3 (lines 3a x 3b)	3	3	3
3 4. Potential to Release (lines 2d+3c)	3	500	3 130
3 5. Likelihood of Release	3	550	3 130
3 Waste Characteristics	3	3	3
3 6. Toxicity/Persistence	3	*	3 1.00E+04
3 7. Hazardous Waste Quantity	3	*	3 100
3 8. Waste Characteristics	3	100	3 32
3 Targets	3	3	3
3 9. Nearest Intake	3	50	3 0.00E+00
310. Population	3	3	3
3 10a. Level I Concentrations	3	**	3 0.00E+00
3 10b. Level II Concentrations	3	**	3 0.00E+00
3 10c. Potential Contamination	3	**	3 4.00E-04
3 10d. Population (lines 10a+10b+10c)	3	**	3 4.00E-04
311. Resources	3	5	3 5.00E+00
312. Targets (lines 9+10d+11)	3	**	3 5.00E+00
313. DRINKING WATER THREAT SCORE	3	100	3 0.25

\* Maximum value applies to waste characteristics category.

\*\* Maximum value not applicable.





## SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Spur Industries - 10/10/96

[illegible]

\* Maximum value applies to waste characteristics category.

\*\* Maximum value not applicable.



GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET  
Spur Industries - 10/10/96

[illegible]

\* Maximum value applies to waste characteristics category.  
\*\* Maximum value not applicable.



GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET  
Spur Industries - 10/10/96

Z	GROUND WATER TO SURFACE WATER MIGRATION	3		3		3
3	COMPONENT	3	Maximum	3	Value	3
3	Factor Categories & Factors	3	Value	3	Assigned	3
3	ENVIRONMENTAL THREAT	3		3		3
C	Likelihood of Release	3		3		3
3	Likelihood of Release (same as line 3)	3	550	3	210	3
C	Waste Characteristics	3		3		3
3	Ecosystem Tox./Mobility/Persist./Bioacc.	3	*	3	5.00E+04	3
3	Hazardous Waste Quantity	3	*	3	100	3
3	Waste Characteristics	3	1000	3	32	3
C	Targets	3		3		3
3	Sensitive Environments	3		3		3
3	24a. Level I Concentrations	3	**	3	0.00E+00	3
3	24b. Level II Concentrations	3	**	3	0.00E+00	3
3	24c. Potential Contamination	3	**	3	0.00E+00	3
3	24d. Sensitive Environments	3	**	3	0.00E+00	3
3	(lines 24a+24b+24c)	3		3		3
3	Targets (line 24d)	3	**	3	0.00E+00	3
C	ENVIRONMENTAL THREAT SCORE	3	60	3	0.00	3
C	WATERSHED SCORE	3	100	3	0.13	3
C	SW: GW to SW COMPONENT SCORE (Sgs)	3	100	3	0.13	3
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\*\* Maximum value not applicable.



\*\*\* No specific maximum value applies, see HRS for details.

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